

## **CAIS Rehabilitation and Improvement Costs (RIC) Part II**

### **Introduction**

CAIS allows for the input of Inspection Units (IUs) that are defined as either Deferred Maintenance or RIC. RIC IUs can stand by themselves unassociated with any other IUs. Frequently, however, a RIC item will have one or more deferred maintenance IUs associated with it. For example, suppose that you are upgrading a 50 ton chiller to 100 tons and there is already a deficiency to replace the 50 ton item. If you enter a new Inspection Unit under RIC for the 100 ton chiller, you will be double counting the 50 ton item under deferred maintenance. RIC Part II attempts to address the double counting issue.

### **Suggested Solution**

When inputting a new Inspection Unit under RIC, RIC Button will be enabled. By clicking on this button, all Inspection Units (IUs), except for the current IU, for the Asset that have a Deferred Maintenance Flag of 'Yes' will be displayed. Any IUs for the Asset that have already been associated with different RIC Items will also be excluded from the list. The user will be able to select all IUs that apply to the RIC Item. The RIC cost for the RIC Item will equal the Official Cost minus the sum of the total Official Costs of the IUs associated with the RIC Item. All existing CAIS reports including the FIMS Export Report, will use the RIC cost for purposes of calculating the total RIC costs. When there are no deferred maintenance IUs associated with a RIC IU, the Official Cost and the RIC cost will be identical.

**CAIS 2000**

File Window Inspection Reports Summary Condition General Maint. Table Maint. FIMS Export Projects Change Password Help

Inspection - Asset: 14002, 111, 0000, DIRECTORS OFFICE, Tracking No: 367806

Assets - Alt 1 IU(s) - Alt 2 **IU Detail - Alt 3** Deficiencies - Alt 4 Cost Adders - Alt 5 Cumulative Cost Adders - Alt 6

Inspector ID: DONALD SEARCY Discipline: Mechanical Tracking #: 367806

Volume: D30 / Mechanical - HVAC Location: ROOM  
WBS: Mech;Heat+Vent;Boilers 191  
Comp./UM: MECH;BOILERS;SOLID FUEL(ASSY) / EACH

Type: Boilers,solid fuel,wd,coal,wd/paper W,peat st,GR out,17,990 MBH / 155107601800

Desc: Repl. Cst: \$195,904 Rpr. Cst: \$0 Cpltd. Cst:  
Qty@Loc: 1 Repl. Qty: 1 Base Cst: \$100,000 Official Cst: \$195,904 Est. Cst:

Year Installed: 1969 Pre Repair Years: Post Repair Years:  
Condition: FAIR <25% Inspection Dt: 00/00/0000 Creation Dt: 10/01/1996 00:00:00  
Urgency: REPLACE IN 3-5 YEARS Last Remodeled Dt: 00/00/0000 Last Updated: 10/14/2003 14:35:04  
Site Def.: OPTIMUM YEAR 1999 Completion Year:  
Deferred Maint.: No RIC Flag: Yes RIC Type: UPGRADE RIC Cost: \$82,600.

Service: CONTINUOUS/ONLINE User Tracking Work Order #:  
Status: Repair Symptom:  
Importance: MAINTENANCE FUNDED Repair Task:  
Access: MECHANICAL PLUMBING/BOILERS Repair Cause:  
Equipment ID: 111BHW02 Repair Purpose: EXCEEDED DESIGN LIFE  
Comment:

Save Reset New Costing Delete Copy Copy All **IU Retrieve** Type Search Next Prior RIC

Ready

Figure 1: IU Detail Tab with the RIC Button and the RIC Cost

**RIC Selection**

RIC Flag	Tracking	Component	Type	Def. Maint.	RIC Flag	RIC Typ. ▲
<input type="checkbox"/>		278829 MECH; WATER CHILLER/COOLER	DRINK FOUNTAIN; WALL MNT; NON RECESS; ALL	Yes ▼	No ▼	
<input type="checkbox"/>		278831 MECH; WATER CHILLER/COOLER	DRINK FOUNTAIN; WALL MNT; NON RECESS; ALL	Yes ▼	No ▼	
<input type="checkbox"/>		91369 ELEC; TRANSFORMERS	XFMR; 150-225KVA; 120-480 V SEC; 1/3 PH	Yes ▼	No ▼	
<input type="checkbox"/>		91308 ELEC; PANELBOARDS	PANELBOARD; 480V; 100-224A; 20-24 CKT	Yes ▼	No ▼	
<input type="checkbox"/>		278843 MECH; PUMP; FLUID; GP	PUMP; CIRC; 4"-6"; 15-25 HP	Yes ▼	No ▼	
<input type="checkbox"/>		278845 MECH; PUMP; FLUID; GP	PUMP; CIRC; 4"-6"; 15-25 HP	Yes ▼	No ▼	
<input type="checkbox"/>		278847 MECH; PUMP; FLUID; GP	PUMP; CIRC; 2"-3"; 1-5 HP	Yes ▼	No ▼	
<input type="checkbox"/>		278849 MECH; PUMP; FLUID; GP	PUMP; CIRC; 2"-3"; 1-5 HP	Yes ▼	No ▼	
<input type="checkbox"/>		278851 MECH; PUMP; FLUID; GP	PUMP; CIRC; 2"-3"; 1-5 HP	Yes ▼	No ▼	
<input type="checkbox"/>		278853 MECH; TANKS FLUID STORAGE; EXPANSION	TANK; EXPANSION; STL; 100-175 GAL	Yes ▼	No ▼	
<input type="checkbox"/>		278855 MECH; TANKS FLUID STORAGE; EXPANSION	TANK; EXPANSION; STL; 100-175 GAL	Yes ▼	No ▼	
<input type="checkbox"/>		314745 EXT; PAINT	PAINT, MEDIUM PREP WORK (EXT)	Yes ▼	No ▼	
<input checked="" type="checkbox"/>		367808 MECH; BOILERS; SOLID FUEL (ASSY)	BOILER; SLD FL; STM & HTW; 1400-3050 MBH	Yes ▼	No ▼	
<input type="checkbox"/>		465823 MECH; AIR HANDLERS; HEAT/VENT UNIT	AIR HANDLR; CENTRL STA; MODULR; 5000-10000	Yes ▼	No ▼	
<input type="checkbox"/>		465824 MECH; AIR HANDLERS; HEAT/VENT UNIT	AIR HANDLR; CENTRL STA; MODULR; 5000-10000	Yes ▼	No ▼	
<input type="checkbox"/>		539756 MECH; AIR HANDLERS; HEAT/VENT UNIT	AIR HANDLR; CENTRL STA; MODULR; 5000-10000	Yes ▼	No ▼	
<input type="checkbox"/>		539760 MECH; AIR HANDLERS; HEAT/VENT UNIT	AIR HANDLR; CENTRL STA; MODULR; 5000-10000	Yes ▼	No ▼	
<input type="checkbox"/>		539762 MECH; FANS+BLOWERS; GP	FAN; CEILING; RTANGLE; 385-885 CFM	Yes ▼	No ▼	
<input type="checkbox"/>		577251 INT; PAINT	PAINT, MEDIUM PREP WORK (INT)	Yes ▼	No ▼	
<input type="checkbox"/>		579534 MECH; FANS+BLOWERS; GP	FAN; CEILING; RTANGLE; 1650-2960 CFM	Yes ▼	No ▼	
<input type="checkbox"/>		579536 MECH; FANS+BLOWERS; GP	FAN; CEILING; RTANGLE; 385-885 CFM	Yes ▼	No ▼	
<input type="checkbox"/>		579538 MECH; FANS+BLOWERS; GP	FAN; CEILING; RTANGLE; 385-885 CFM	Yes ▼	No ▼	
<input type="checkbox"/>		579540 MECH; FANS+BLOWERS; GP	FAN; CEILING; RTANGLE; 385-885 CFM	Yes ▼	No ▼	
<input type="checkbox"/>		579727 MECH; FANS+BLOWERS; GP	FAN; CENT; RFEX; BDR; 1660-2800 CFM; 12-40"D	Yes ▼	No ▼	
<input type="checkbox"/>		579742 MECH; FANS+BLOWERS; GP	FAN; CENT; RFEX; BDR; 4600-8750 CFM; 12-40"D	Yes ▼	No ▼	
<input type="checkbox"/>		579880 MECH; FANS+BLOWERS; GP	FAN; CENT; RFEX; DDR; 420-2150 CFM; 8-20"D MP	Yes ▼	No ▼	
<input type="checkbox"/>		582027 ELEC; TRANSFORMERS	XFMR; 1000 KVA; 120-480V SEC; 1 OR 3 P	Yes ▼	No ▼	
<input type="checkbox"/>		582029 ELEC; TRANSFORMERS	XFMR; 60-112.5KVA; 120-480V SEC; 1/3 PH	Yes ▼	No ▼	
<input type="checkbox"/>		582031 ELEC; PANELBOARDS	PANELBOARD; 480V; 225-399A; 42 CKTS	Yes ▼	No ▼	
<input type="checkbox"/>		582036 ELEC; PANELBOARDS	PANELBOARD; 480V; 225-399A; 42 CKTS	Yes ▼	No ▼	

OK Cancel

**Figure 2: The RIC Popup Window**

Adobe Acrobat - [ric.pdf]

File Edit Document Tools View Window Help

CONDITION ASSESSMENT INFORMATION SYSTEM

Rehab and Improvement Costs (RIC) Detail Report

LAWRENCE LIVERMORE

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10/17/2003

Tracking No.	Component Type	Qty.	U/M	RIC Type	Official Cost
Asset ID: 111					
588014	INT;FLOOR;CARPET FLR,CARPET,NYLON,COMM GRADE,32 OZ	900	SQYD	CODE COMPLIANCE	\$42,870
153061	INT;FLOOR;CARPET FLR,CARPET,NYLON,COMM GRADE,32 OZ	615	SQYD		\$29,295
Adjusted Cost:					\$13,575
588012	INT;FLOOR;CARPET FLR,CARPET,NYLON,COMM GRADE,32 OZ	800	SQYD	CODE COMPLIANCE	\$38,107
No Deferred Maintenance Items					
Adjusted Cost:					\$38,107
367806	MECH;BOILERS;SOLID FUEL(ASSY) BOILERS,SOLID FUEL,WD,COAL,WD/PAPER W,PEAT ST,GR OUT,17,990 MBH	1	EACH	UPGRADE	\$195,904
367808	MECH;BOILERS;SOLID FUEL(ASSY) BOILR,SLDFL,STM&HTW, 1400-3050MBH	1	EACH		\$38,666
Adjusted Cost:					\$157,238
Total:					\$208,920

1 of 1 11 x 8.5 in

**Figure 3: The RIC Detail Report**

**Functionality:**

1. The costing program will deduct the official cost for any selected Deferred Maintenance Inspection Units from the Official Cost of the RIC Inspection Unit to calculate the Modernization Cost.
2. If there are any Deferred Maintenance IUs associated with a RIC IU, they will be displayed with the checkbox checked with the RIC button is clicked.
3. A new RIC report will be developed to display all of the Deferred Maintenance IUs associated with the RIC IUs.

**Assumptions:**

1. Deficiencies to be associated with a RIC item must be for the same Asset.

**Open Issues:**

1. Should there be a new tab (RIC DM IUs) on the IU window that list the deferred maintenance IUs associated with the RIC IU?
2. Should Deferred Maintenance items that are for the same WBS as the RIC IU be available to be associated with the RIC Item or should all Deferred Maintenance items be available to be associated with the RIC Item?